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NICKEL IN AUGUST 2002

In August, reported domestic nickel consumption on a daily average basis was slightly greater than that of July, according to the U.S. Geological Survey. Average daily nickel consumption of cathode, pellets, briquets, and ferronickel for stainless steel was 79.3 metric tons per day (t/d)—7% greater than the 73.8 t/d (revised) for July and slightly more than the 78.5 t/d (revised) for August 2001. Consumption of elemental nickel to make nickel-base corrosion-resistant alloys was 8% less than the corresponding tonnage reported for July. The 8% decrease for corrosion-resistant alloys was partially offset by a 5% increase in consumption for superalloys. Sales to plating companies averaged 33.4 t/d, about 18% greater than the July sales figure. Total consumption for the first 8 months of 2002 was down 15% from the 59,600 t reported for the corresponding period of 2001.

On August 31, U.S. consumer stocks of cathode, pellets, briquets, and powder totaled 1,870 t—18% more than the 1,580 t for July 31, but 6% less than the 1,990 t reported for yearend 2001. Stocks in London Metal Exchange (LME) warehouses worldwide decreased 9% during August to 21,648 t, but were 141% greater than on March 31, 2001, when LME stocks bottomed out at 9,000 t after a 16-month slide. Preliminary data collected by the International Nickel Study Group indicated that, at the end of July 2002, world nickel producers (excluding those in Austria, China, the former Yugoslavia, and the Ural area of Russia) had approximately 92,600 t of nickel in primary products in stock, of which 66,600 t or 72% were Class I materials. Class I materials are refined products with a nickel (Ni) content of 99% or greater (electrolytic cathode, pellets, briquets, rondelles, powder, etc.). Class II materials include ferronickel, oxide sinter, and East Asian utility nickel—products with a Ni content less than 99%.

Percentages reported in the above paragraphs may not be verifiable owing to concealment of individual company proprietary data and late reporting of data.

The United States imported 70,800 t of primary nickel in the first 7 months of 2002, 14% less than the 82,200 t for the corresponding period of 2001. Class I materials accounted for 87% of total primary imports received during the first 7 months of 2002. Trade data for August 2002 will appear in a subsequent report.

Cobalt-nickel feasibility study underway in Cameroon

On August 1, the Government of Cameroon granted Geovic Cameroon S.A. exclusive rights to develop a cobalt-nickel deposit near Zoulabot, East Province. The deposit is about 29 kilometers east of Lomie and the edge of the Dja World Heritage Reserve. Geovic Ltd. of Grand Junction, CO, has a 60.5% equity position in the Cameroonian company. The remaining 39.5% is controlled by the Government of Cameroon and other stakeholders. The Geovic affiliate believes that it has discovered the largest primary cobalt deposit in the world. The company has been actively exploring the lateritized serpentinite deposit since its discovery in 1995.

The mining permit runs for 25 years and allows the company to produce a cobalt-nickel sulfide intermediate product for export. Exploration drilling and trenching indicate a resource in excess of 225 million metric tons, grading about 0.3% cobalt and 0.6% Ni. (Geovic, Ltd., 2002). Six areas have been identified for future mining—(from north to south) Rapodjombo, Nkamouna, North Mang, South Mang, Messea, and Kondong. The mine would be an open pit operation. Nkamouna, the first deposit proposed for mining, has a 7-meter-thick ore zone, starting, on the average, at a depth of 8 meters below the surface. If the feasibility study is positive, mining could begin as early as 2005 (Sherborne, 2002). The cobalt and nickel would be extracted by heap leaching. The first phase of the two-part bankable feasibility study is being financed in part by the U.S. Trade and Development Agency (Embassy of the United States of America, Office of Public Affairs, Yaounde, Cameroon, 2002; U.S. Trade and Development Agency, 2002§[1]).

[1]A reference that includes a section twist (§) is found in the Internet Reference Cited section.

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TABLE 1
CONSUMPTION OF NICKEL (EXCLUSIVE OF SCRAP), BY FORM AND USE 1/

(Metric tons, nickel content)

Period	Cathodes, pellets, briquets, and powder	Ferronickel	Oxide-sinter, salts, and other forms	Total	Total year to date
2001:					
August	5,920	981	296	7,190	59,600
September	5,460	1,090	187	6,730	66,400
October	5,490	757	160	6,410	72,800
November	5,000	608	323	5,930	78,700
December	4,460	537	215	5,210	83,900
January-December	71,300	10,100	2,500	83,900	XX
2002:					
January	5,080	774	292	6,150	6,150
February	5,000	890	281	6,170	12,300
March	5,030	723	375	6,130	18,500
April	5,370	879	286	6,540	25,000
May	5,030	722	87	5,840	30,800
June	5,450	873	261	6,580	37,400
July	5,500 r/	730	272	6,500 r/	43,900
August:					
Steel:					
Stainless and heat resisting	1,610	843	W	2,460	19,400
Alloy (excludes stainless)	224	--	--	224	2,170
Superalloys	1,240	--	W	1,240	9,660
Copper-nickel alloys	W	--	--	W	W
Electric, magnetic, and expansion alloys	10	--	--	10	86
Other nickel & nickel alloys	W	--	W	W	W
Cast iron	W	--	--	W	W
Electroplating (sales to platers)	1,040	--	--	1,040	7,740
Chemical and chemical uses	W	--	--	W	W
Other uses	1,450	--	236	1,680	11,500
Total reported	5,580 2/	843	236	6,660	50,600
Total all companies (calc) 3/	XX	XX	XX	9,490	72,100
2002: January-August	42,000	6,430	2,090	50,600	XX
2001: January-August	50,900	7,140	1,610	59,600	XX

r/ Revised. W Withheld to avoid disclosing company proprietary data; included in "Other uses" category. XX Not applicable. -- Zero.

1/ Data are rounded to no more than three significant digits; may not add to totals shown.

2/ Of consumption, 4,820 metric tons was consumed as cathodes and pellets, the remainder as briquets and powder.

3/ Figures represent calculated apparent consumption, based on the revised proportion of reported primary consumption (70.11%) to apparent primary consumption for 2000.

TABLE 2
ENDING STOCKS OF NICKEL (EXCLUSIVE OF SCRAP) HELD BY CONSUMERS, BY FORM AND USE 1/ 2/

(Metric tons, nickel content)

Period	Cathodes, pellets, briquets, and powder	Ferronickel	Oxide-sinter, salts, and other forms	Total
2001:				
August	2,390	645	107	3,140
September	2,500	309	102	2,910
October	2,770	391	226	3,390
November	2,480	330	198	3,010
December	1,990	522	289	2,800
2002:				
January	1,800	832	282	2,920
February	2,110	454	106	2,670
March	2,230	152	134	2,510
April	2,490	513	94	3,100
May	2,250	82	127	2,460
June	1,840	63	138	2,040
July	1,580 r/	98	98	1,780
August:				
Steel (stainless, heat resisting and alloy	790	112	(3/)	902
Nonferrous alloys 4/	1,060	--	(3/)	1,060
Foundry (cast irons)	(3/)	--	(3/)	(3/)
Chemical (catalysts, ceramics, plating salts, etc.) and unspecified uses	19	--	84	103
Total	1,870	112	84	2,070

r/ Revised. -- Zero.

1/ Data are rounded to no more than three significant digits; may not add to totals shown.

2/ Stocks held by companies that consume nickel in more than one end-use category are credited to the major category. Stocks are subject to revisions owing to inventory adjustment.

3/ Included in the "Chemical and unspecified uses" category.

4/ Includes superalloys, nickel-copper and copper-nickel alloys, permanent magnet alloys, and other nickel alloys.

TABLE 3
CONSUMPTION AND ENDING STOCKS OF PURCHASED SECONDARY NICKEL, BY USE 1/

(Metric tons, nickel content)

	Consumption			Stocks		
Period	Ferrous scrap 2/	Nonferrous scrap 3/	Total scrap	Ferrous scrap 2/	Nonferrous scrap 3/	Total scrap
2001:						
August	5,590	777	6,360 r/	2,780	113	2,890
September	5,590	751	6,340 r/	3,030	105	3,140 r/
October	5,150	1,540	6,690 r/	3,170	100	3,270
November	3,970	829	4,790 r/	3,330	92	3,420
December	3,950	784	4,730 r/	3,750	93	3,840 r/
January-December	55,100	11,400	66,500 r/	XX	XX	XX
2002:						
January	4,940	784	5,720	3,180	86	3,270
February	4,920	810	5,730	3,070	88	3,160
March	5,050	767	5,810	2,960	102	3,060
April	5,190	740	5,930	2,980	109	3,090
May	5,020	620	5,640	3,690	97	3,790
June	6,340	549	6,890	3,340	103	3,440
July	5,950	713 r/	6,660 r/	3,320	97	3,410
August	6,140	688	6,830	3,110	105	3,210
2002- January-August	43,600	5,670	49,200	XX	XX	XX
2001- January-August	36,400	7,420	43,800	XX	XX	XX

r/ Revised. XX Not applicable.

1/ Data are rounded to no more than three significant digits; may not add to totals shown.

2/ Nickel content is calculated from an average nickel content and the reported gross weight of scrap.

3/ Combined consumption and stocks of aluminum-base, copper-base, and nickel-base scrap.

TABLE 4
U.S. IMPORTS FOR CONSUMPTION OF NICKEL, BY COUNTRY 1/

(Metric tons, nickel content) 2/

Period and country of origin	Cathodes, pellets, and briquets	Powder and flakes	Ferro-nickel	Metal-lurgical-grade oxide	Waste and scrap	Stainless steel scrap	Chemicals	Total 3/	Total year to date 4/	Wrought nickel
2001:										
July	9,490	505	795	195	548	274	207	12,000	87,600	99
August	6,510	1,100	1,790	16	569	352	176	10,500	98,200	82
September	7,980	438	1,080	120	238	294	202	10,400	109,000	156
October	11,200	617	160	263	434	265	279	13,200	122,000	142
November	9,160	434	1,330	162	429	174	322	12,000	134,000	54
December	8,360	640	707	188	344	193	276	10,700	144,000	95
January-December	111,000	8,310	11,600	1,350	5,580	3,180	3,200	144,000	XX	1,140
2002:										
January	6,550	597	446	400	443	283	244	8,960	8,960	74
February	11,900	428	620	128	341	235	235	13,900	22,900	109
March	5,760	813	679	54	315	275	277	8,180	31,000	30
April	6,220	551	983	--	221	349	274	8,590	39,600	116
May	6,600	590	1,240	14	222	478	297	9,450	49,100	53
June	8,950	391	1,160	238	174	460	228	11,600	60,700	43
July:										
Australia	1,670	--	--	--	--	--	--	1,670	5,920	3
Brazil	--	--	1	--	--	--	--	1	678	--
Canada	4,030	429	--	214	34	666	2	5,380	35,000	--
Colombia	--	--	305	--	--	7	--	312	1,260	--
Dominican Republic	--	--	632	--	--	1	--	633	3,270	--
Finland	120	--	--	--	--	--	25	145	2,320	--
France	69	--	--	--	97	--	12	178	1,560	12
Germany	140	135	--	--	--	--	56	331	693	14
Japan	--	(5/)	--	--	3	--	49	52	306	15
Mexico	--	--	--	--	--	162	--	162	657	--
New Caledonia	--	--	--	--	--	--	--	--	300	--
Norway	53	--	--	--	--	--	--	53	4,630	--
Russia	5,500	--	--	--	--	--	--	5,500	15,600	--
South Africa	38	20	--	--	--	--	--	58	218	--
Sweden	--	11	--	--	--	--	--	11	37	1
United Kingdom	62	29	--	--	91	--	11	193	647	5
Venezuela	--	--	123	--	--	28	--	151	1,070	--
Zimbabwe	76	--	--	--	--	--	--	76	717	--
Other	38	3	18	--	142	10	70	281	964	19
Total	11,800	627	1,080	214	367	874	225	15,200	75,900	69
2002: January-July	57,800	4,000	6,220	1,050	2,080	2,950	1,780	75,900	XX	496
2001: January-July	68,000	5,070	6,520	597	3,570	1,900	1,940	87,600	XX	606

XX Not applicable. -- Zero.

1/ Data are rounded to no more than three significant digits; may not add to totals shown.

2/ The nickel contents are assumed to be as follows: metallurgical-grade oxide (77%), waste and scrap (50%), and stainless steel scrap (7.5%). The chemical category includes chlorides (25%), sulfates (22%), and other salts (22%), supported catalysts (22%), and oxide, sesquioxide, and hydroxide (65%).

3/ Excludes wrought nickel.

4/ May include revisions for prior months.

5/ Less than 1/2 unit.

Source: U.S. Census Bureau.

TABLE 5
U.S. EXPORTS OF NICKEL, BY COUNTRY 1/

(Metric tons, nickel content) 2/

Period and country of destination	Cathodes, pellets, and briquets	Powder and flakes	Ferro-nickel	Metal-lurgical-grade oxide	Waste and scrap	Stainless steel scrap	Chemicals	Total 3/	Total year to date	Wrought nickel
2001:										
July	154	73	12	161	1,370	3,520	452	5,740	37,700	99
August	90	108	11	205	1,160	1,600	224	3,400	41,100	116
September	156	115	1	161	1,030	1,970	178	3,610	44,800	151
October	170	90	14	142	1,740	2,680	346	5,180	49,900	177
November	158	85	--	132	1,100	1,350	148	2,970	52,900	124
December	125	72	(4/)	131	1,290	2,310	198	4,130	57,000	163
January-December	1,400	1,380	50	1,940	15,700	32,900	3,680	57,000	XX	2,400
2002:										
January	344	135	6	122	1,110	1,030	233	2,990	2,990	192
February	170	81	3	152	989	3,720	229	5,350	8,330	167
March	245	151	(4/)	64	1,470	2,040	219	4,190	12,500	262
April	187	113	--	67	1,280	3,890	226	5,770	18,300	139
May	65	119	10	111	1,360	1,900	213	3,780	22,100	271
June	105	134	(4/)	19	1,550	2,500	155	4,470	26,500	283
July:										
Australia	--	1	--	--	35	(4/)	--	36	81	--
Belgium	--	21	--	--	--	35	(4/)	56	298	(4/)
Canada	17	10	--	5	975	177	22	1,210	9,110	5
China	--	--	(4/)	--	--	506	1	507	2,800	1
Germany	--	14	--	(4/)	76	223	3	316	745	4
India	--	1	--	--	--	116	--	117	709	--
Italy	--	1	--	--	--	--	--	1	20	(4/)
Japan	--	5	--	--	89	69	15	178	1,320	(4/)
Korea, Republic of	12	4	--	--	27	161	36	240	5,880	(4/)
Mexico	82	3	--	--	26	--	50	161	1,130	101
Netherlands	--	28	--	--	292	--	4	324	612	2
South Africa	--	--	--	3	--	--	2	5	12	--
Spain	--	--	--	--	--	--	--	--	674	15
Sweden	--	--	--	--	31	--	(4/)	31	442	--
Taiwan	--	(4/)	--	--	--	669	8	677	5,390	(4/)
United Kingdom	--	3	(4/)	--	5	69	(4/)	77	379	21
Other	20	49	--	1	--	16	63	149	1,020	51
Total	131	140	1	9	1,560	2,040	204	4,080	30,600	200
2002: January-July	1,250	872	21	545	9,320	17,100	1,480	30,600	XX	1,520
2001: January-July	701	908	24	1,170	9,400	23,000	2,590	37,700	XX	1,670

XX Not applicable. -- Zero.

1/ Data are rounded to no more than three significant digits; may not add to totals shown.

2/ The nickel contents are assumed to be as follows: metallurgical-grade oxide (77%), waste and scrap (50%), and stainless steel scrap (7.5%). The chemical category includes chlorides (25%), sulfates (22%), and other salts (22%), supported catalysts (22%), and oxide, sesquioxide, and hydroxide (65%).

3/ Excludes wrought nickel.

4/ Less than 1/2 unit.

Source: U.S. Census Bureau.

TABLE 6
U.S. IMPORTS FOR CONSUMPTION OF NICKEL ALLOYS, BY COUNTRY 1/

(Metric tons, gross weight)

Period and country of origin	Unwrought alloyed ingot	Bars, rods, and profiles	Wire	Plates and sheets	Foil	Tubes and pipes	Other alloyed articles	Total	Total year to date
2001:									
July	413	389	511	293	1	199	141	1,950	12,600
August	520	308	318	203	(2/)	148	159	1,660	14,300
September	357	161	247	202	(2/)	193	129	1,290	15,600
October	321	271	452	312	1	234	182	1,770	17,300
November	341	268	467	122	(2/)	153	143	1,490	18,800
December	350	354	342	300	1	140	126	1,610	20,400
January-December	4,110	3,860	5,030	3,070	15	2,600	1,770	20,400	XX
2002:									
January	353	231	399	329	--	203	155	1,670	1,670
February	183	177	408	227	1	248	154	1,400	3,070
March	256	207	407	293	(2/)	327	159	1,650	4,720
April	390	229	531	254	(2/)	233	151	1,790	6,510
May	179	248	456	289	1	337	162	1,670	8,180
June	232	294	401	287	15	511	122	1,860	10,000
July:									
Australia	65	--	(2/)	--	--	--	--	65	786
Belgium	6	--	1	--	--	--	(2/)	7	108
Canada	--	--	--	--	--	6	7	13	165
France	--	1	95	6	--	15	(2/)	117	716
Germany	2	144	218	213	31	59	6	673	3,990
Italy	--	43	4	--	--	9	32	88	456
Japan	--	--	1	1	--	9	3	14	1,310
Mexico	--	--	--	--	--	--	79	79	557
Netherlands	--	--	--	--	--	--	8	8	43
South Africa	--	--	--	--	--	--	--	--	232
Sweden	--	32	264	9	--	22	1	328	1,650
United Kingdom	60	36	21	132	--	(2/)	5	254	1,210
Other	(2/)	3	20	1	(2/)	4	55	82	538
Total	133	259	624	361	31	124	196	1,730	11,800
2002: January-July	1,730	1,640	3,230	2,040	49	1,980	1,100	11,800	XX
2001: January-July	2,220	2,490	3,200	1,930	13	1,740	1,030	12,600	XX

XX Not applicable. -- Zero.

1/ Data are rounded to no more than three significant digits; may not add to totals shown.

2/ Less than 1/2 unit.

Source: U.S. Census Bureau.

TABLE 7
U.S. EXPORTS OF NICKEL ALLOYS, BY COUNTRY 1/

(Metric tons, gross weight)

Period and country of destination	Unwrought alloyed ingot	Bars, rods, and profiles	Wire	Plates and sheets	Foil	Tubes and pipes	Other alloyed articles	Total	Total year to date
2001:									
July	1,420	744	106	615	9	163	263	3,320	20,100
August	1,240	642	165	548	5	129	354	3,080	23,100
September	1,610	667	97	543	6	155	390	3,470	26,600
October	1,300	601	171	770	13	107	950	3,920	30,500
November	1,190	641	135	623	23	124	333	3,070	33,600
December	954	591	82	404	7	164	160	2,360	36,000
January-December	13,400	7,890	1,660	7,030	146	1,900	3,970	36,000	XX
2002:									
January	861	599	93	572	9	134	247	2,520	2,520
February	808	600	106	596	43	115	340	2,610	5,120
March	884	626	178	505	11	197	653	3,050	8,180
April	618	451	96	476	12	204	278	2,130	10,300
May	862	495	99	638	32	136	297	2,560	12,900
June	1,070	393	142	567	8	127	363	2,670	15,500
July:									
Australia	33	--	(2/)	--	--	1	6	40	465
Belgium	12	59	(2/)	(2/)	--	(2/)	1	72	1,100
Canada	5	43	34	18	6	31	58	195	1,750
France	148	67	8	14	(2/)	(2/)	7	244	2,660
Germany	11	50	2	23	(2/)	(2/)	6	92	1,820
India	(2/)	3	(2/)	3	--	--	(2/)	8	74
Ireland	(2/)	(2/)	(2/)	1	(2/)	(2/)	(2/)	3	35
Italy	90	(2/)	(2/)	15	(2/)	4	2	111	880
Japan	1	11	7	32	--	(2/)	2	53	585
Korea, Republic of	11	11	1	8	(2/)	1	2	34	364
Mexico	1	1	27	4	1	56	129	219	1,790
Netherlands	--	1	(2/)	2	(2/)	(2/)	(2/)	3	34
Singapore	3	7	1	1	--	(2/)	1	13	104
Spain	17	1	--	--	--	--	1	19	43
Sweden	--	124	--	--	1	--	(2/)	125	193
Switzerland	38	1	--	9	--	1	(2/)	49	443
Taiwan	3	1	--	17	(2/)	3	1	25	239
United Kingdom	60	79	3	175	(2/)	38	3	358	2,680
Other	4	59	11	70	--	9	88	241	2,180
Total	437	518	94	392	8	144	307	1,900	17,400
2002: January-July	5,540	3,680	808	3,750	123	1,060	2,490	17,400	XX
2001: January-July	7,070	4,750	1,010	4,140	92	1,220	1,780	20,100	XX

XX Not applicable. -- Zero.

1/ Data are rounded to no more than three significant digits; may not add to totals shown.

2/ Less than 1/2 unit.

Source: U.S. Census Bureau.

TABLE 8
NICKEL CONSUMPTION IN CAST AND WROUGHT PRODUCTS

	Percent	
	Wrought	Cast
August 2002:		
Stainless and heat resisting steels	62	38
Alloy steels	100	(1/)
Superalloys	83	17
Copper-nickel alloys	97	3
Other nickel-base alloys	100	(1/)

1/ Less than 1/2 unit.

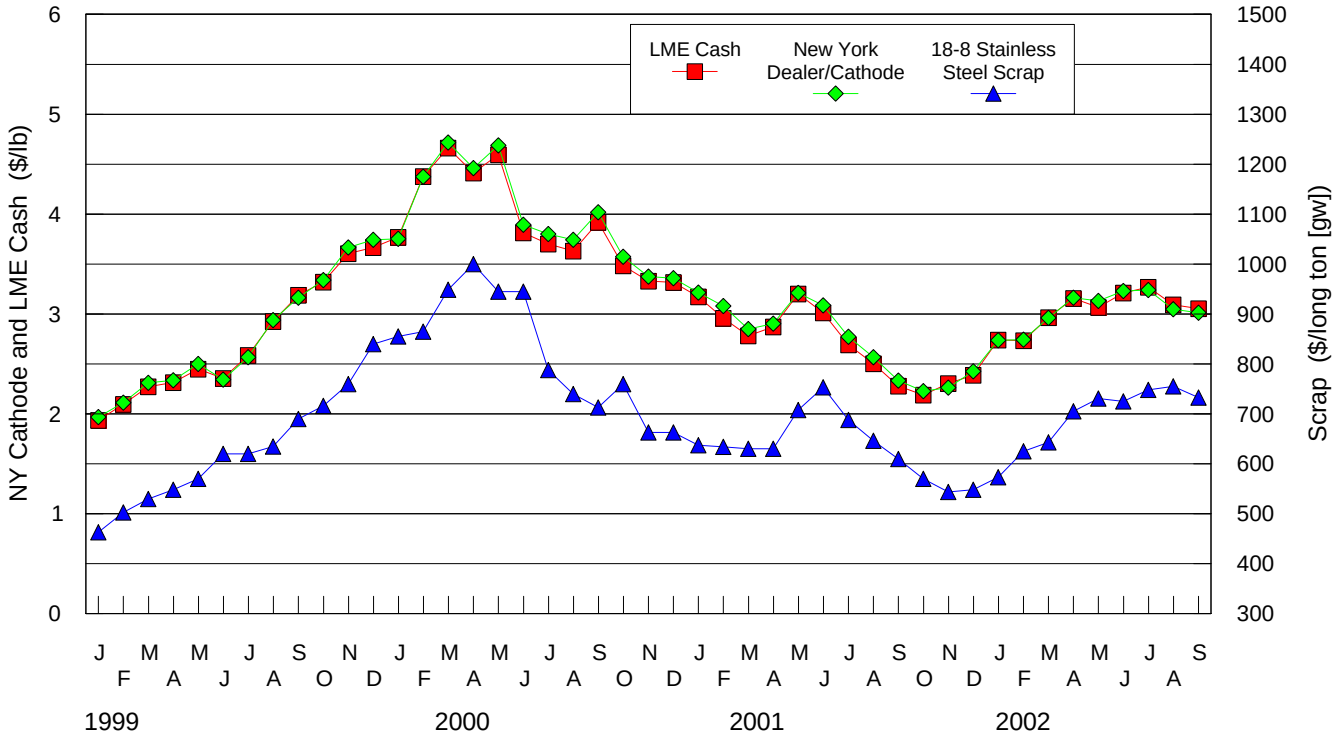
TABLE 9
NICKEL PRICES

Date	Cathode NY Dealer $/lb.	LME Cash $/t	LME Cash $/lb.	18/8 Stainless steel scrap Pittsburgh $/long ton(gw)
2002:				
Average for week ending:				
August 2	3.04-3.17	6,649.500	3.016	745-765
August 9	3.05-3.16	6,669.000	3.025	745-765
August 16	3.10-3.17	6,720.000	3.048	745-765
August 23	3.14-3.22	6,750.000	3.062	745-765
August 30	3.14-3.21	6,788.750	3.079	745-765
September 6	3.09-3.16	6,650.500	3.017	720-745
September 13	3.10-3.33	6,901.500	3.130	720-745
September 20	3.07-3.25	6,622.500	3.004	720-745
September 27	2.95-3.08	6,425.500	2.915	720-745
Average for month of:				
January	2.736	6,043.182	2.741	573
February	2.745	6,029.250	2.735	625
March	2.963	6,537.500	2.965	643
April	3.163	6,958.214	3.156	705
May	3.130	6,761.364	3.067	731
June	3.213	7,119.861	3.230	725
July	3.268	7,142.717	3.240	748
August	3.094	6,717.143	3.047	755
September	3.053	6,640.238	3.012	733

Source: Platts Metals Week and American Metal Market.

1999-2002 AVERAGE MONTHLY PRICES

(Derived from Metals Week and American Metal Market quotations)



1999-2002 STOCKS